

CLAIMS

1. A method for measuring and computing parameters upon striking an object to be moved, such as a ball, at a hitting location on a striking surface of a striking device, such as a tennis racquet, in which at least one sensor system
5 comprising at least one sensor, which system is attached to the striking device, delivers signals to a computer, which computes at least the velocity of the object being moved and/or the velocity of the striking device from said signals, which velocity is presented on one or more presentation de-
10 vices, wherein the acceleration of the striking device during a swinging movement and the impact with the object to be moved is measured in at least one direction, and wherein at least the velocity of the object being moved and/or of the striking device is derived from said measurement, for example
15 by means of a computer or the like.

2. A method for measuring and computing parameters upon striking an object to be moved, such as a ball, a shuttle or a puck, at a hitting location on a striking surface of a striking device, such as a tennis racquet, a badminton rac-
20 quet, a squash racquet, a table tennis bat, a cricket bat, a hockey stick or the like, in which at least one sensor system comprising at least one sensor, which system is attached to the striking device, delivers signals to a computer, at least upon making contact with the object to be moved, which com-
25 puter computes at least the velocity of the object being moved and/or the position of the hitting location on the striking surface from said signals, which velocity and/or position is presented on one or more presentation devices, such as a panel, a sheet or a screen, wherein the acceleration of
30 the striking device during the swinging movement and/or upon impact with the object to be moved is measured in at least one direction, preferably two or three directions perpendicular to each other, from which measurement the velocity of the object being moved and/or the acceleration of the striking
35 device is derived, for example by means of a computer or the like computing device, and displayed on a presentation de-

vice, which process is preferably repeated upon measurement of successive strokes, with the result being displayed in the form of a graphic illustration and/or a statistical diagram, preferably also taking into account the measured interval of time between the strokes and the changes in the velocity during said successive strokes.

3. A method according to claim 1 or 2, wherein the sensors measure the acceleration of the swing of the striking device and register whether an impact with the ball takes place on the front side or on the rear side of the striking device.

4. A method according to any one of the preceding claims, wherein the number of strokes carried out with the striking device, both in the case of an impact with the object to be moved on the rear side and in the case of an impact on the front side, are registered and presented.

5. A method according to claim 1 or 2, wherein the sensor system, in addition to measuring the acceleration, also registers vibrations that occur in the hitting area and transmits signals comprising information on the amplitude and the frequency of said vibrations to the computer, which computes the position of the hitting location on the striking surface that causes the lowest amplitude vibrations upon impact with the object to be moved.

6. A striking device, such as a racquet, a bat or a stick, comprising at least one sensor system attached to the striking device for delivering measuring signals upon movement of the striking device and/or upon impact of an object to be moved with a striking surface present on at least one side of the striking surface, wherein the sensor or sensors of said sensor system is (are) arranged for measuring the magnitude of accelerations in three directions perpendicular to each other, which sensor system is connected to a computer (likewise attached to the striking device) for the purpose of delivering signals thereto, which computer functions to determine the velocity of the striking device at the time of said impact and the velocity of the object to be moved after said impact, which values can be displayed on one or more

presentation elements, such as a display screen, a paper strip or the like.

7. An apparatus for carrying out the method according to claim 1 or 2, comprising a striking device, such as a racquet, a bat or a stick, and at least one sensor system attached to the striking device for delivering measuring signals upon impact of an object to be moved with a striking surface present on at least one side of the striking device, wherein the sensor or sensors of said sensor system is (are) arranged for measuring the magnitude of accelerations in one direction, or preferably in two or three directions perpendicular to each other, which sensor system is connected to a computer (likewise attached to the striking device) for the purpose of delivering signals thereto, which computer functions to determine the velocity of the striking device and/or of the object to be moved after said impact, which values can be displayed on one or more presentation elements, such as a display screen, a paper strip or the like.

8. An apparatus for carrying out the method according to claim 1 or 2, comprising a striking device, such as a racquet, a bat or a stick, and at least one sensor system attached to the striking device for delivering measuring signals upon impact of an object to be moved with a striking surface present on at least one side of the striking device, wherein said sensor system is arranged for measuring the magnitude of accelerations in one direction, or preferably in two or three directions perpendicular to each other, which sensor system is connected to a signal amplifier for delivering generated signals thereto, and wherein a connecting element is present for transmitting said signals to a computer remote from the striking device, which computer functions to derive information, such as the velocity of the object to be moved after the impact with the striking device, from said signals, which information can be displayed on one or more presentation elements, such as a display screen, an X-Y writer, a paper strip or the like.

9. An apparatus according to any one of the claims 5 - 8, wherein said striking device is provided with a striking

surface both on its front side and on its rear side, and wherein said sensor system is arranged for delivering signals that relating to accelerations during the swing of the striking and to the impact with the object to be moved.

5 10. An apparatus according to any one of the preceding claims 5 - 9, wherein at least one of the sensors of the sensor system that are sensitive to the X-, Y- and Z-
directions is sensitive to relatively high G-values and/or at
least one of said sensors is sensitive to relatively low G-
10 values.